

University of Groningen

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13,000 year-old forest being examined

During excavation works near Leusden in Utrecht, the remains of a thousands year-old pine forest have been discovered. The researchers involved say it is a unique find that is of significant international academic importance, and RUG scientists will find out exactly how old the forest is.

By Peter Keizer / Translation by Alain Reniers

The researchers of the University of Utrecht and the Cultural Heritage Agency [state](#) that the discovered remains of the pine forest are about 13,000 years old and come from a relatively warm period at the end of the last ice age. However, whether this is true or not is still being investigated in Groningen.

‘We can’t be sure until some measurements have been made,’ says Hans van der Plicht, an expert on carbon dating. According to the endowed professor, the first samples of the discovered pines and dwarf birch, a bush that is still found in Scandinavia, have already arrived at the lab of the Centre for Isotope Research.

The age of fossils can be determined with a particle accelerator. The C14 dating method is based on the fact that every living thing has a specific amount of radioactive carbon. If the organism dies, then this radioactive carbon disappears over time, which is how the age can be determined: the less radioactive carbon there is, the older the object.

Growth rings

It will be at least another month before the results of the first measurements are known, if not longer, according to Van der Plicht. ‘We just moved from the building at Nijenborgh 4 to the Energy Academy. We still need to set everything up. And I’m just about to retire, so I’ve transferred the coordination of matters to someone else,’ he says.

The researchers in Utrecht found about 160 blown down trees that were embedded in a layer of peat and covered by loose sand thousands of years ago. This kept the tree trunks in prime condition. The surface and the subsequent growth rings in the pine trees provide a unique view of a forest from the ice age, says the Cultural Heritage Agency.



It will give scientists an accurate view of the effects of drastic and very fast climate changes from the relatively warm allerød period (ca. 13,100 to 12,900 years ago) to the intensely cold younger dryas period (ca. 12,900-11,700 years ago), the era right before the start of the current warm period (the holocene).

This change was attributed to the abrupt influx of melt water from the North American ice sheet to the Atlantic Ocean. As a result, the warm Gulf Stream suddenly stopped flowing and the Netherlands was gripped by the ice age. It is one of the scenarios which climate researchers think might repeat itself in the future as a result of climate change.

Research

‘We will first test a few rings of the tree to see what period we’re in,’ says Van der Plicht. If the researchers from Utrecht turn out to be right and the trees are more than 2,000 years old, then more research will be done in Groningen. ‘We’ll zoom in on how to determine the exact age,’ says the endowed professor.

Van der Plicht expects to have these results by summer. Until then, he is not at liberty to say. ‘It’s quite a sensitive matter. There is a lot of emailing back and forth: ‘The press is on to it.’ A lot of parties are involved in the process, so I’m not sure if I can simply give the results. When the time is right, the Cultural Heritage Agency will issue a press release.’

Photo: Cultural Heritage Agency

[Nederlands](#)

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